



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,260	11/17/2003	Arun Kwangil Iyengar	YOR920030489US1 (163-17)	4978
24336	7590	09/19/2006	EXAMINER	
KEUSEY, TUTUNJIAN & BITETTO, P.C. 20 CROSSWAYS PARK NORTH SUITE 210 WOODBURY, NY 11797			PARDO, THUY N	
			ART UNIT	PAPER NUMBER
			2165	

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,260

Applicant(s)

IYENGAR ET AL.

Examiner

Thuy N. Pardo

Art Unit

2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-16, 19-26 and 28 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 17, 18 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/17/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's Application filed on November 17, 2003 has been reviewed.
2. Claims 1-28 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 9-16, 19-26 and 28 are rejected under 35 U.S.C. 103(a) as being obvious over Hasegawa US Patent No. 5,528,511 in view of Arnold et al. (Hereinafter "Arnold") US Patent Application No. 2003/0200194.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter

Art Unit: 2165

disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

As to claim 1, Hasegawa teaches the invention substantially as claimed, comprising:
in response to a request to update the object, determining a future invalidation time when the object should be invalidated in storage elements currently storing the object [determine delay times, col. 5, lines 50 to col. 6, lines 12; col. 3, lines 36 to col. 4, lines 24; ab]; and
delaying updating the object until the invalidation time has passed [col. 5, lines 43 to col. 6, lines 25].

However, Hasegawa does not explicitly teach storing an object in a plurality of storage elements although it has the same functionality of delay time of verification of modified information. Arnold teaches storing an object in a plurality of storage elements [see 120 of fig. 1; 0045].

It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to add the feature of Arnold to the system of Hasegawa as an essential means to increase the availability and efficiency of resources for accessing data sources.

As to claim 2, Hasegawa and Arnold teach the invention substantially as claimed. Arnold further teaches serving an object by a storage element only if the invalidation time for the object has not passed [0047].

As to claim 3, Hasegawa and Arnold teach the invention substantially as claimed. Arnold further teaches that the system includes a consistency coordinator and the method further comprises steps of: determining the invalidation time using the consistency coordinator; and communicating the invalidation time to the storage elements storing the object [0047; 0058; ab].

As to claim 4, Hasegawa and Arnold teach the invention substantially as claimed. Arnold further teaches sending, from the consistency coordinator to a storage element and/or from a storage element to the consistency coordinator, heart beat messages to obtain availability information [0047].

As to claim 5, Hasegawa and Arnold teach the invention substantially as claimed. Arnold further teaches declaring an entity expecting a heartbeat down in response to the entity failing to receive a heart beat [ab; fig. 21].

As to claim 6, Hasegawa and Arnold teach the invention substantially as claimed. Hasegawa further teaches sending an acknowledge message, by the storage elements, that the invalidation time has been received [col. 6, lines 50-59].

As to claim 9, Hasegawa and Arnold teach the invention substantially as claimed. Arnold further teaches that the storage elements include at least one cache [ab; fig. 1].

As to claims 10-16, 19-26 and 28, all limitations of these claims have been addressed in the analysis of claims 1-9 above, and these claims are rejected on that basis.

Allowable Subject Matter

Claims 7, 8, 17, 18 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 7, 17, the limitation of invalidating all objects that have a current time later than the invalidation time, taken together with other limitations of claim 1 was not disclosed by the prior art of record.

As to claim 8, 18 and 27, the limitation of discarding and replacing a current version of an object with a pending-update version if the object has a current time later than the invalidation time, taken together with other limitations of claim 1 was not disclosed by the prior art of record.

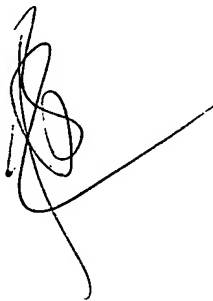
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy N. Pardo whose telephone number is 571-272-4082. The examiner can normally be reached on Mon-Fri.

Art Unit: 2165

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 16, 2006

A handwritten signature in black ink, appearing to be 'Thuy N. Pardo', with a long, sweeping horizontal line extending to the right.

THUY N. PARDO
PRIMARY EXAMINER